

**Notice of Allowability**

Application No.

10/690,568

Examiner

Satyendra K. Singh

Applicant(s)

TSUZUKI ET AL.

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/10/2006.
2. ☒ The allowed claim(s) is/are 1-4,6,8-10,14 and 15.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 05/09/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

SANDRA E. SAUCIER  
PRIMARY EXAMINER

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

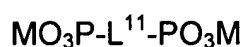
Authorization for this examiner's amendment was given in a telephone interview with attorney on record, Mr. Mark L. Hayman, on May 9, 2006.

The application has been amended as follows:

#### *In the Claims*

Claims 1-4 have been amended as follows:

1. A method for detaching a carrier for cell culture from cultured cells formed on a surface of said carrier for cell culture, which comprises the step of bringing the carrier for cell culture into contact with a compound represented by the following formula (I) or a polyphosphoric acid or a salt thereof:



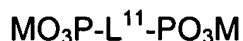
wherein L<sup>11</sup> represents at least one substituted or unsubstituted divalent hydrocarbon group; and M represents hydrogen atom or a cation, wherein the carrier for cell culture comprises a calcium alginate gel layer, to thereby detach the carrier for cell culture from the cultured cells.

2. A method for culturing a layer of cells by using a carrier for cell culture which comprises the steps of:

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(1) culturing cells on a carrier for cell culture comprising a calcium alginate gel layer;  
and

(2) bringing the cultured cells and carrier for cell culture into contact with a compound represented by the following formula (I) or a polyphosphoric acid or a salt thereof,



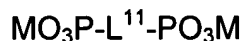
wherein  $\text{L}^{11}$  represents at least one substituted or unsubstituted divalent hydrocarbon group; and M represents hydrogen atom or a cation, to thereby detach the carrier from the cultured layer of cells.

3. A method for transferring a cell culture, which comprises the steps of:

(1) culturing cells on a first carrier for cell culture comprising a calcium alginate gel layer,

(2) bringing the cell culture into contact with a surface of a second carrier for cell culture with weighting such that the cells adhere to both surfaces; and

(3) bringing the cell culture obtained in the aforementioned step (2) into contact with a compound represented by the following formula (I) or a polyphosphoric acid or a salt thereof;

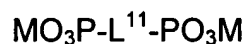


Wherein  $\text{L}^{11}$  represents at least one substituted or unsubstituted divalent hydrocarbon group; and M represents hydrogen atom or a cation, to detach the first carrier for cell culture.

4. A method for laminating cultured cell layers, which comprises the steps of:

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- (1) culturing cells on a carrier for cell culture comprising a calcium alginate gel layer to provide a first cultured cell layer;
- (2) bringing the first cultured cell layer into contact with a second cultured cell layer with weighting such that the first cell layer and the second cell layer adhere to each other; and
- (3) bringing the adhered cell layers and carrier for cell culture obtained in the aforementioned step (2) into contact with a compound represented by the following formula (I) or a polyphosphoric acid or a salt thereof:



wherein  $\text{L}^{11}$  represents at least one substituted or unsubstituted divalent hydrocarbon group; and M represents hydrogen atom or a cation, to thereby detach the carrier for cell culture and obtain laminated cultured cell layers.

### ***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance: Applicant's arguments and amendments to the claims (filed with the office on April 10<sup>th</sup>, 2006) have been entered, and were found to be persuasive. In view of the current examiner's amendments to the claims, the invention (A method for detaching a carrier for cell culture from cultured cells formed on a surface of said carrier for cell culture, the carrier comprising a calcium alginate gel layer; see detailed recitation in the instant claims 1-4, 6, 8-10, 14 and 15) is now free of the prior art relied upon by the examiner.


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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satyendra K. Singh whose telephone number is 571-272-8790. The examiner can normally be reached on 9-5MF (alternate Fridays OFF).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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